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TITLE : ETCHING METHOD AND WASHING METHOD FOR SEMICONDUCTOR WAFER

ABSTRACT : PURPOSE: To prevent the surface of a semiconductor wafer from being contaminated with metals by adding a chelate agent which reacts with a trace amt. of metallic contaminants contained in an etching liquid and washing liquid or a complexing agent to the etching liquid and washing liquid, at the time of etching or washing the semiconductor wafer.

CONSTITUTION: The non-ionized ultrafine particulate metals, such as Fe and Cu, exist in a trace amt. in acidic aq. solns. and org. solvents, and therefore, the surface of the semiconductor wafer is liable to be contaminated by these metals at the time of etching or washing the semiconductor wafer with an aq. hydrofluoric acid soln. or washing the wafer with an aq. hydrochloric acid soln., etc., or washing and etching the wafer or washing the wafer with the org. solvent, such as metachloroethylene. The chelate agent and complexing agent forming the chelate compd. and complex compd. with the above-mentioned metallic impurities, such as Cu and Ni, are added to the washing liquid consisting of the org. solvent, the etching liquid consisting of the aq. acidic soln. and the washing liquid in this case., by which the contamination of the surface of the semiconductor wafer by the impurity metals is prevented.

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